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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,559	08/22/2003	Masayoshi Nishio	0229-0773P	9174
2292	7590	12/14/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			BLAU, STEPHEN LUTHER	
			ART UNIT	PAPER NUMBER

3711

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,559

Applicant(s)

NISHIO, MASAYOSHI

Examiner

Stephen L. Blau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-11 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The substitute specification has been approved and entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi in view of 2001-286585 and Kobayashi.

Kawaguchi discloses a wood type club (Figs. 3-4), a shaft length of 45 inches (Col. 9, Lns. 24-26), a torque of (3.4-3.8, 4.0-4.4, 4.6-5.0, 5.6-7.2) degrees (Fig. 14), applying a torque of 13.9 kgf x m to a 50 mm position for an end of a shaft while fixing a position of a shaft at 1040 mm from the end (Fig. 16). Clearly there are an indefinite amount of positions to apply a torque and fix a position of a shaft from an end and an artisan skilled in the art of classifying a torque for a shaft would have selected a suitable position in which a twist angle measured at a position at 40 mm from an end and fixing a position of the shaft 865 inches from the end is included.

Kawaguchi lacks a club length from 43-48 inches, a head volume not less than 250 cc, a torque which meets the equations as defined in claim 1, and twist angle measured at a position at 40 mm from an end and fixing a position of the shaft 865 inches from the end.

2001-286585 discloses a head having a head volume not less than 250 cc in the form of 360 ml or more (English Solution), and a distance between a gravity point of a head and a center line of a shaft being 45 mm or less (English Solution) in order to have a head with a high inertial moment, light weight and short distance of center of gravity in spite of a large volume (English Abstract). In view of the reference of 2001-286585 it would have been obvious to modify the club of Kawaguchi to have a head having a head volume of 360 ml or more and a distance between a gravity point of a head and a center line of a shaft being 45 mm or less in order to have a head with a high inertial moment, light weight and short distance of center of gravity in spite of a large volume. As such the club for a distance between a gravity point of a head and a center line of a shaft of 45 mm would require a torque of between 3.645 and 5.73 degrees as required by claim 1. If a 13.9 kgf x m torque of Kawaguchi 50 mm position from an end of a shaft with a fixed a position of a shaft at 1040 mm from the end produces between (3.4-3.8, 4.0-4.4, 4.6-5.0, 5.6-7.2) degrees of movement, for the same 13.9 kgf x m torque at a position at 40 mm from an end with a fixed position of the shaft 865 inches from the end the degree of movement of 3.645 to 5.73 degrees would be an obvious selection meeting the formula in claim 1. Moving the distance closer between the torque position and the fixed position (175 mm) would decrease the torque value and moving the torque

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away from the tip end of the shaft (15mm) would most likely increase the torque value however the changes would be small compared to the allowed range of torque of Kawaguchi (3.4-3.8, 4.0-4.4, 4.6-5.0, 5.6-7.2) degrees such that it would be obvious to still be in the range of 3.645 to 5.73 degrees.

Kobayashi discloses a head with a shaft being inserted to the sole or close to (Fig. 4). In view of the patent of Kobayashi it would have been obvious to have a shaft secured to a head at or close to a sole of a head in order to have more area between a shaft and head to secure the head and shaft together and in order to have a club length of 45 inches which is a common length of clubs used for driving.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi in view of 2001-286585 and Kobayashi as applied to claims 1-2 and 4-6 above, and further in view of Oonuki.

Kawaguchi lacks a gravity point distance L being in a range of from 33-41 mm. 2001-286585 discloses a distance between a gravity point of a head and a center line of a shaft being 45 mm or less (English Solution) in order to have a head with a high inertial moment, light weight and short distance of center of gravity in spite of a large volume (English Abstract). Oonuki discloses a gravity point distance L being in a range of from 20-50 mm (Col. 2, Lns. 23-35). In view of the references of 2001-286585 and Oonuki it would have been obvious to modify the club of Kawaguchi to have a gravity point distance L being in a range of 41 mm in order to have a head with a high inertial moment, light weight and short distance of center of gravity in spite of a large volume. If

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a 13.9 kgf x m torque of Kawaguchi 50 mm position from an end of a shaft with a fixed a position of a shaft at 1040 mm from the end produces between (3.4-3.8, 4.0-4.4, 4.6-5.0, 5.6-7.2) degrees of movement, for the same 13.9 kgf x m torque at a position at 40 mm from an end with a fixed position of the shaft 865 inches from the end the degree of movement of 3.073 to 4.586 degrees would be an obvious selection meeting the formula in claim 1. Moving the distance closer between the torque position and the fixed position (175 mm) would decrease the torque value and moving the torque away from the tip end of the shaft (15mm) would most likely increase the torque value. However these changes would be small compared to the allowed range of torque of Kawaguchi (3.4-3.8, 4.0-4.4, 4.6-5.0, 5.6-7.2) degrees such that it would be obvious to still be in the range of 3.073 to 4.586 degrees.

Allowable Subject Matter

5. Claims 7-11 are allowed. None of the prior art discloses or renders as obvious a method of making a club with a step of determining whether the torque and gravity point distance satisfies the equations as defined in claims 7 and 10 in addition to the other elements of structure claimed.

Response to Arguments

6. The argument that 2001-286585 is improper in that it is not concerned with a shaft or a relationship between a head gravity point distance and Torque is disagreed with. The reference shaft discloses a shaft used in the art. Clearly the golf head of 2001-286585 is a suitable selection and clearly a shaft of the reference patent is a suitable shaft for 2001-286585. For a golf club a shaft needs a head and a head needs a shaft. Though none of the references disclose the relationship as claimed for a club, the different dimensions are suitable selections in the art. The argument that 2001-286585 is improper in a distance of 45 mm is outside the range of 34-41 is disagreed with. The english solution clearly states that this distance can also be less than 45 mm. The argument that the references are improper since there is no indication of what parameters can be used to vary the values of torque and gravity point distance for establishing the relationship as claimed is disagreed with. These values are normal values used in the art. An artisan is just combining normal values. Each reference gives motivation why these values are desirable apart from the other value. The argument that it is improper to use the reference of Oonuki since Oonuki includes to wide of a range is disagreed with. Oonuki discloses the claimed values as with other suitable selections.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (571) 272-4406. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Greg Vidovich whose telephone number is (571) 272-4415. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9306)

slb/ 6 December 2004


STEPHEN BLAU
PRIMARY EXAMINER